

1 ELECTRIC MOTOR ASSIST TYPE POWER STEERING APPARATUS

2 BACKGROUND OF THE INVENTION

3 1. FIELD OF THE INVENTION

5 4 The present invention relates to an electric motor assist type power steering apparatus. More specifically, the present invention relates to an electric-motor-controlled power steering apparatus, which reduces the steering effort of a driver by applying power (steering torque) generated by an electric motor to a steering system.

10

5 2. PRIOR ART

6 An electric motor assist type power steering apparatus (hereinafter defined as "power steering apparatus") supplies an assistant steering force to a steering system in order to assist a driver in turning a steering wheel. Vehicles equipped with power steering apparatus are in widespread use. In such vehicles, since smooth turning of the steering wheel is enabled by the power steering apparatus, the driver can turn the steering wheel with ease.

15

7 As an example of these kinds of power steering apparatus, a pinion assist type electric power steering apparatus, in which a worm shaft and a worm wheel are used in order to transmit an assistant steering force generated by an electric motor to a steering shaft, is known. The power steering apparatus, disclosed in the Japanese patent unexamined patent publication H11-43062, is one example thereof.

20

8 In this power steering apparatus, as shown in FIG. 8, an electric motor 51, which is used to provide an assistant steering force to a steering shaft, is provided. When the steering wheel is rotated in order to turn the steering shaft, the electric

25

OK to
enter
5/25/04
[signature]